Top Unheading Device
Based on DeltaGuard technology

- Double, live-loaded, dynamic, metal seats
- Designed to keep coke out of body cavity
- Steam purged body
- Low steam consumption
- Adaptable to all top head diameters
- Hydraulically actuated
- On-site maintenance
- DeltaGuide™ compatible
Based on DeltaGuard technology

- Double, live-loaded, dynamic, metal seats
- Designed to keep coke out of body cavity
- Steam purged body
- Low steam consumption
- Adaptable to all top head diameters
- Hydraulically actuated
- On-site maintenance
- DeltaGuide™ compatible
## DeltaGuard Top Units Sold

<table>
<thead>
<tr>
<th>Customer</th>
<th>Orders</th>
<th>Installations</th>
<th>Mfg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChevronTexaco-Pascagoula</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>ChevronTexaco-El Segundo</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Suncor-Ft McMurray</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Petrobras-Brasil</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Marathon</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

| TOTAL TOP UNITS             | 20     | 12            | 8   |
Drill Stem Guide / Blow-out Preventer

- Designed for maximum safety
- Fully enclosed head at all times
- No exposure to personnel or deck at any time
- Configurable to:
  - Contain blow-outs
  - Safely vent blow-outs
  - Guide bent drill-stems
Drill Stem Guide / Blow-out Preventer

- Drill-head up
- Guide closed
Drill Stem Guide / Blow-out Preventer

- Drill-head up
- Guide-lock released
Drill Stem Guide / Blow-out Preventer

- Drill-head up
- Guide enclosure open
Drill Stem Guide / Blow-out Preventer

- Drill-head down
- Guide in maintenance position
Drill Stem Guide / Blow-out Preventer

- Drill-head down
- Guide open
Drill Stem Guide / Blow-out Preventer

- Drill-head down
- Guide in cutting position
Together we can make a difference